The friction factor, or travel time factor, is critical to the gravity model distribution. The distance between traffic zones and the time required to travel those distances affects the friction factor. It is also related to the specific trip purpose (HBW, HBO, NHB, NHB2, and E←→I). The friction factors for the Laurinburg/East Laurinburg model were derived from those developed for a similar study. These factors, which are summarized in **Table 12**, were adjusted to reflect travel times for the study area for each trip purpose and input into the gravity model.

Table 12. Friction Factors

Time Interval	Friction Factors (Trips Distributed)				Time Interval	Friction Factors (Trips Distributed)			
	HBW	HBO	NHB	E → I		HBW	HBO	NHB	E → I
1	500	500	450	700	11	52	41	23	116
2	1000	1000	900	1400	12	39	31	17	91
3	2271	2119	1782	2895	13	30	24	13	72
4	971	870	661	1426	14	24	18	10	58
5	516	449	318	838	15	19	14	7	47
6	309	263	176	542	16	0	0	6	38
7	199	167	107	373	17	0	0	5	30
8	136	112	69	268	18	0	0	0	24
9	96	78	46	199	19	0	0	0	0
10	80	56	32	151	20	0	0	0	0

Trip Assignment

The last phase of the travel demand forecasting process is trip assignment. Trip assignment determines the route used to complete a trip and loads all trips onto the network. The all-or-nothing method is the simplest form of loading and was used to load the network. For each zone-to-zone pair, this method assigns all trips to the route with the shortest time. No trips are assigned to the other competing routes.

The existing Laurinburg roadway network encompasses two bypass routes, US 74 Bypass and US 15-401-501 Bypass. Observation of travel patterns in the area show that not all through traffic follows these Bypass routes when traversing the planning area. In order to account for those through trips that utilize the secondary or Business routes, trip assignment was accomplished by loading the trips in two distinct iterations. First, the through trips were loaded exclusive of the internal travel trips. The through trips were loaded on the base year network for which roadway speeds were modified to allow for through traffic to travel both the Business and Bypass routes. Next, the internal trips were loaded independent of the through trips onto the unmodified base year network. The two resulting networks were then merged, yielding a network loaded with all trips.